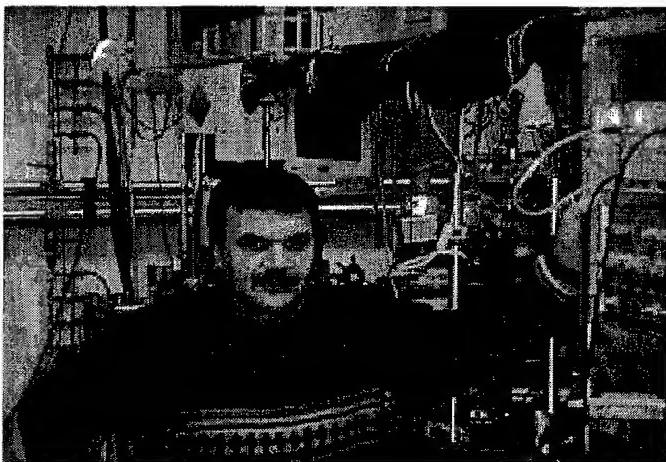


Valerio Romano was born in Italy and is Swiss citizen. He received the physics M.Sc. degree in 1989 and the Ph.D. degree in 1991 from the University of Bern, Switzerland.

As a post-doc he was engaged in surgical applications of infrared laser radiation and on the basic research of the interaction between laser radiation and biological materials as well as in sensor systems in the laser surgery group.



In 1994 he joined the Laser-Materials processing group where he worked on the applications of short near infrared laser pulses for the processing of ceramics and metals. In 1998 he was nominated head of the laser materials processing group. From 2000 to 2004 he was involved in the NCCR "Quantum Photonics" subproject "High power fiber lasers".

His current main research topics are i) microstructured fibers for laser applications, ii) the optical properties of luminescent materials as well as iii) fundamental pulsed laser-materials interaction processes including ablative and generative modifications of materials by pulsed laser radiation.

Starting from 2008, besides his project leader position at the IAP of the University of Bern, he holds a physics lecturer position at the Berne University of Applied Sciences. He is also coordinator of the "Kompetenzzentrum Fasern und Faserlaser", a joint laboratory in the field of optical fibers of both institutions.

Selected publications of V. Romano

- [Ro 1] T.V.Kononenko, M.S.Komlenok, V.P. Pashinin, S.M.Pimenov, V.I.Konov, M.Neff, V.Romano, W.Lüthy, "Femtosecond laser microstructuring in the bulk of diamond", Diamond and Related Materials 18, 1 96–199 (2009).
- [Ro 1] T.V. Kononenko, M. Meier, M.S. Komlenok, S.M. Pimenov, V. Romano, V.P. Pashinin, V.I. Konov, "Microstructuring of diamond bulk by IR femtosecond laser pulses", Appl. Phys. A 90, 645–651 (2008).
- [Ro 1] Matthias Meier, Dietmar Bertsch, Nico Onda, Marco Etter, Martin Gutsche, Alex Dommann, Valerio Romano, Marc-A. Nicolet, "Laser Trimming of Amorphous $Ta_{42}Si_{13}N_{45}$ Thin Films with Ultrashort Pulses", Journal of Microelectronics, MAM 2006, Materials for Advanced Metallization, Grenoble, France, 2006, ed.: J.Torres, R.Mader and B.Chevrier, vol.:83, no.: 11-12, pp.:2234-2237, 2006
- [Ro 2] G. Dumitru, V.Romano, H.P.Weber, S.Pimenov, T.Kononenko, J.Hermann, S.Brunneau, Y.Gerbig and M.Shupegin,

Laser treatment of tribological DLC films, Diamond and Related Materials, Volume 12, Issues 3-7, March-July 2003, Pages 1034-1040.

- [Ro 3] **Gabriel Dumitru, Valerio Romano, Heinz P. Weber, Sergei Pimenov, Taras Kononenko, Marc Sentis, Jörg Hermann and Sébastien Bruneau,**
Femtosecond laser ablation of diamond-like carbon films, Applied Surface Science, Volume 222, Issues 1-4, 30 January 2004, Pages 226-233.
- [Ro 4] **T.V. Kononenko, V.V. Kononenko, S.M. Pimenov, E.V. Zavedeev, V.I. Konov, V. Romano and G.D. Dumitru,**
Effects of pulse duration in laser processing of diamond-like carbon films, Diamond and Related Materials, Volume 14, Issue 8, August 2005, Pages 1368-1376.
- [Ro 5] **Gabriel Dumitru, Valerio Romano, Heinz P. Weber, Yvonne Gerbig, Henry Haefke:**
Femtosecond laser ablation of nitride-based thin films to improve their tribological performance, online, ISSN: 0947-8396, 2004
- [Ro 6] **Gabriel Dumitru, Valerio Romano, Heinz P. Weber, M. Sentis:**
Femtosecond ablation of ultrahard materials, Journal of Applied Physics A, vol.: 74, no.: 6, pp.: 729, 2002
- [Ro 7] **Gabriel Dumitru, Valerio Romano, Heinz P. Weber, M. Sentis, W. Marine:**
Ablation of carbide materials with femtosecond pulses, Applied Surface Science, vol.: 205, no.: 80, 2003
- [Ro 8] **Romano, V., et al..**
Laser surface microstructuring to improve tribological systems. Proceedings Lat'02, Moscow, Russia (2002)
- [Ro 9] **T.V. Kononenko, S.V. Garin, S.M. Pimenov, V.I. Konov, V. Romano, B. Borsos, H.P. Weber,**
Laser ablation and micropatterning of thin TiN coatings, Applied Physics A 71, 627-631(2000)
- [Ro 10] **Urs Pedrazza, Valerio Romano, Willy Lüthy**
"Yb³⁺:Al³⁺:sol-gel silica glass fiber laser"
To appear in Optical Materials (2006)
- [Ro 11] **M. Janssen, B. Wilhelm, V. Romano, G.Karametaxas, R. Weber, H.P. Weber**
"Zeitlich und räumlich aufgelöste Messungen 2-dimensionaler Temperaturverteilungen mit dotierten Sol-Gel-Dünnsschichten",
Temperatur'98, Berlin, 1998.
- [Ro 12] **B. Wilhelm, M. Janssen, V. Romano, G.Karametaxas, R. Weber, H.P. Weber** "Doped silica films as 2D-temperature sensors"
Proc. T EMPERATUR '98, Berlin (Germany), VDIV erlag GmbH, Düsseldorf (Germany), 1998, pp. 133-138.
- [Ro 13] **B. Wilhelm, V. Romano, H.P. Weber**
"Detection of infrared laser radiation with thin fluorescing films"
Proc. Laser '99 (CLEO Europe 1999 Focus Meetings).
- [Ro 14] **B. Wilhelm, V. Romano, H.P. Weber**
"Thin fluorescing films as temperature sensors"
Proc. T EMPMEKO 99.

- [Ro 15] **V. Pham,V .Romano,H .P. Weber**
"Thermische Stabilität und reversibles Ausbleichen der organischen Farbstoffe DCM und Pyridin 2 in einer Sol-Gel Matrix und in AlPO₄-5 Nanotubes"
diploma work, University of Bern, 2003/04 MP-1.
- [Ro 16] **B. Wilhelm,V . Romano, H.P.W eber**
"Rare earth doped sol-gel glasses"
scientific report, University of Bern, 2001/02 MP-1.
- [Ro 17] **B. Wilhelm,V . Romano, H.P.W eber**
"Rare Earth Doped Thin Films for Time Resolved Thermography"
Proc. T EMPMEKO 01,2 002, pp. 1131-1136.
- [Ro 18] **B. Wilhelm,V . Romano, H.P.W eber**
"Fluorescence lifetime enhancement of Nd³⁺-doped sol-gel glasses by Al-codoping and CO₂-laser processing"
Journal-of-Non-Crystalline-Solids, 15 Oct. 2003; 328(1-3): 192-198.
- [Ro 19] **B. Wilhelm,V . Romano, H.P.W eber**
"Reduction of Eu³⁺ to Eu²⁺ in Al-codoped silica glasses fabricated by the sol-gel technique and CO₂-laser processing"
J. of Sol Gel Sci. and Tech. 32, 259-262, 2004
- [Ro 20] **M.L ocher, V. Romano, H.P.W eber**
"Rare-earth doped sol-gel materials for optical waveguides"
Optics and Lasers in Engineering, v ol.: 43,p p.:3 41-347
- [Ro 21] **M.L ocher, V. Romano, H.P.W eber**
"Production and characterization of a Nd-doped sol-gel fiber laser"
to be submitted for publication.
- [Ro 22] **D. Michel, M.L ocher, W. Lüthy, V. Romano, and H.P. Weber**
"Tunability of a Nd³⁺:Al³⁺:Sol-Gel Glass Fibre Laser"
EPS-QEOD Europhoton Conference on Solid-state and fiber coherent light sources,
Lausanne, Switzerland August 20-September 3 Europhysics Conference Abstracts Volume
28C Fib-10055 (2004)